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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,932	09/17/2001	Hendrikus Jan Kapaan	110191	4418

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EXAMINER

KRAMER, DEVON C

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,932

Applicant(s)

KAPAAAN ET AL

Examiner

Devon C Kramer

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NW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

- 1) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 2) Claims 1-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, applicant states in the independent claims, "a linear movement of the screw is obtained". As best understood from the specification and the drawings a linear motion of the screw does not take place, but a linear motion of the nut does take place. Further applicant should be aware that a new matter rejection could have been used, because the current amendment changed the scope of the claims.

- 3) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 4) Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is difficult to read and understand. It could be re-written to read, "An actuator, comprising: a housing accommodating a screw mechanism; and a drive

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comprising a motor, wherein said screw mechanism comprises a nut and a screw, the screw being rotatably supported relative to the housing, such that upon rotation of the screw relative to the nut a linear movement of the nut is obtained; wherein at least a rotor of the motor is rotatably supported on the screw which is rotatably supported relative to the housing.”

Claim Rejections - 35 USC § 102

5) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6) Claims 1-3, 7, 10-11 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al (5348123).

As best understood from the application, in reference to claim 1, Takahashi et al provides an actuator (figure 3), comprising: a housing (2) accommodating a screw mechanism (5); a drive including a motor (3); the screw mechanism including a nut (6) and a screw (5), the screw rotatably supported relative to the housing, such that upon rotation of the screw relative to the nut a linear movement of one of the nut is obtained; and a rotor (shaft out of motor) of the drive is rotatably supported with respect to the screw which is rotatably supported relative to the housing; a claw piece (10) carrying at least two brake pads (14, 16) which enclose a gap for accommodating a disc brake.

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In reference to claims 2 and 3, Takahashi et al provides an actuator where the screw and rotor are rotatably supported with respect to the housing by a support or auxiliary bearing (5c, 108).

In reference to claim 7, Takahashi et al provides an actuator where the outer ring of the bearing supports a rotatable sleeve (106) which is in connection with the rotatable component of the drive.

In reference to claim 10, Takahashi et al provides an actuator where the sleeve is connected to the rotor of the motor.

In reference to claim 11, Takahashi et al provides an actuator where the nut and the screw are rotatably supported both according to an axis parallel with respect to the linear movement, and according to at least on axis transverse with respect to the linear movement.

In reference to claim 30, the examiner takes official notice that elements of gearing and parts under a high load are conventionally formed by hard turning.

Claim Rejections - 35 USC § 103

7) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8) Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (5348123).

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In reference to claim 33, Takahashi teaches all of the limitations as cited in the 102 rejections above, but figure 3 of Takahashi lacks a claw piece.

Figure 2 of Takahashi teaches a claw piece.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the caliper in Figure 3 of Takahashi with a claw piece as shown in figure 2 merely to provide a means to support the other brake pad.

9) Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (5348123) in view of Airheart (4180146).

Takahashi et al lacks the teaching of a bore containing a grease dosing unit.

Airheart teaches the use of a grease dosing unit (94).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the assembly of Takahashi et al with a grease dosing unit in order to provide a means to keep the rotating parts lubricated. It is well known in the art of gearing to maintain a sufficient amount of grease or oil on the mating surfaces.

10) Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (5348123) in view of Chaire (5293966).

It is known in the art to produce load bearing parts of high strength material.

Takahashi et al is silent to the material used to produce the components of the device.

Chaire teaches the use of producing load bearing parts out of a carbon.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the load bearing parts of Takahashi et al with carbon material as taught by Chareire, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshinb, 125 USPQ 416.

11) Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (5348123) in view of Tanaka (6089359).

It is known in the art to use an encoder to measure rotation. Takahashi et al lacks the teaching of an encoder for measuring relative rotation.

Tanaka teaches the use of an encoder for measuring relative rotation.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the actuator of Takahashi et al with the encoder as taught by Tanaka in order to measure the relative position of the internal parts.

Response to Arguments

13) Applicant's arguments with respect to claim 1-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Drennen et al provides a nut screw mechanism.

15) . Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

16) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devon C Kramer whose telephone number is 703-305-0839. The examiner can normally be reached on Mon-Fri 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DK

Robert A. Siconolfi
ROBERT A. SICONOLFI
PATENT EXAMINER
9/29/04